

# BIOLOGICAL SCIENCES



## ***Biological Sciences at Drexel***

The biological sciences encompass many fields. Biologists study the structure and functions of living organisms from the individual cell to the full organism, and collectively to the community level. Drexel at BCC's program in Biological Sciences focuses on experientially based instruction to provide you with the knowledge, tools, and skills you'll need.

Our curriculum includes extensive use of computers in the laboratory, as well as a strong foundation in a range of scientific fields to prepare you for a career in the private sector, government, and research laboratories, as well as for advanced graduate study in teaching, medicine, and other health related specialties.

## ***Drexel Co-op for Biological Sciences***

Drexel's prestigious co-operative education program, in which students alternate between periods of classroom study and periods of professional work experience, is a key part of the major. Biological Sciences majors participate in one six-month co-op period of full-time employment.

## **A Few Drexel Co-op Position Titles**

- Inpatient Rehabilitation Therapy
- Research Assistant — Pharmaceuticals
- Emergency Room Medical Assistant
- Behavioral Science Research (Pediatric Medicine)
- Clinical Lab Assistant

## ***Employers***

Companies that have hired Drexel students include:

- Children's Hospital of Philadelphia
- Lankenau Hospital
- Johnson & Johnson
- Viropharma
- Centocor
- Amicus
- Merck

## ***Potential Careers***

**Biomedical Research Scientist.** A scientific researcher who studies human and animal diseases including their causes, prevention, and treatment. This type of research may include the analysis of human and animal cells and tissues to assess the disease process.

**Molecular Biologist.** This researcher studies genetic processes at the molecular level that are related to cancer, aging, human development,

and genetic diseases. The knowledge of DNA, RNA, and proteins can be applied to fields such as pharmacogenomics, bioinformatics, and genetic engineering.

**Microbiologist.** This biologist investigates the characteristics of microbes in medicine and in the environment. This researcher studies areas of microbiology like antibiotic resistance in bacteria, community acquired infections, emerging infectious diseases, and infectious disease control and prevention.

**Pharmaceutical Development Scientist.** This individual works in pharmaceutical research in the testing and evaluation of new drugs. Pharmaceutical researchers contribute to the design and implementation of procedures in the testing of drug action and toxicity.

### ***Courses You'll Really Enjoy***

**Biology of Cancer.** Biology of Cancer - In this course, students will apply their studies of cell and molecular biology to understand cancer pathology. Starting with a fundamental knowledge of normal cellular processes, students will learn how normal processes go awry in tumor development and metastasis, and the current approaches being used to develop new cancer therapeutics.

**Developmental Biology.** This course covers molecular, cellular and physiological mechanisms underlying development of animals from gametes to adults. It focuses on the major stages and selected aspects of vertebrate development in importance animal model systems. Particular emphasis is on the importance of differential gene expression and its regulation in development.

**Human Genetics.** This course applies the fundamentals and principles of genetics to their relevance in human genetic diseases and disorders. The topics include the study of single gene diseases, pedigree analysis and genetic testing, complex genetics of cognition and behaviors, cytogenetics, epigenetics, gene therapy, and human genomics.

**Microbiology.** This course focuses on the morphological, physiological, and biochemical characteristics of bacteria, fungi, algae, protozoa, and viruses. It introduces the molecular genetics of microbes, the origins of pathogenicity, and the role of microbes in the environment as well as in the causative agents of human diseases.

### ***For More Information***

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